Vito Dimatteo 7-26-16

Unit: Energy

Grade: 6th grade

Length: 2-3 periods

**Midterm Lesson Plan**

**Periods 1-2 :** Renewable and non-renewable energy sources and their affects

**Teacher Standards:** Component 3a: Communication with students

**Students CCLS: 4-PS3-2.** Make observations to provide evidence that energy can be transferred from place to place by sound, light, heat, and electric currents.

**Objectives:**

SWBAT use technology and teacher created resources to work collaboratively in small groups.

SWBAT conduct research to understand the benefits and constraints to using specific types of renewable and non-renewable energy sources and decide which sources can be sustainable in the future.

**Materials:**

* computers
* gmail account
* [www.energy4me.org](http://www.energy4me.org)
* edhelper notes (pre-printed) for groups based on topics

**Do now:** SWBAT recall information and complete a t-chart that has students list different renewable and non-renewable energy resources.

**Mini Lesson:** SWBAT participate in a class discussion as to which of the listed energy sources are used most widely around the world today.

-students will then take as vote to see which energy sources will be used in the future and why?

- The teacher will then model how to sign onto gmail and create a google slides presentation.

- A step by step instruction worksheet will be given to students if needed

**Group work:** SWBAT form their pre-created groups and choose a topic/job role to research and begin creating their power point presentations.

* groups will be created heterogeneously so that if one student struggles that others can assist.
* Computers will be handout out to each group.

Topics include:

**Renewable Energy Sources: Non-Renewable**

1. Hydropower (Easy) 1. Coal (easy)
2. Geothermal (Difficult) 2. Uranium (difficult)
3. Biomass (difficult) 3. Gas (easy)
4. Wind (easy) 4. Petroleum (difficult)
5. Solar (easy) 5. Nuclear (difficult)

**Group Roles:**

1. Fact finder: Student will find at least 5 fun facts about their topic
2. Positive impacter: Student will find at least 4 positive impacts of their energy source
3. Negative Impacter: Student will find at least 4 negative impacts of their energy source

**Individual Practice:** SWBAT self assess themselves based on the rubric provided below. Students use the rubric to rate themselves on how effective their group was in finding information and working together.

**Assessment:** The teacher will use the rubric to assess the effectiveness of the material covered.

**Differentiation:**

* Students will be group heterogeneously to assist struggling scholars.
* Steps to log onto google docs or google slides will listed on the board as well as printed and given to student as needed
* Students will be able to choose the role they feel they believe they will work best in to make them accountable for their work

**Closure:** SWBAT answer a reflection question that connects the learned material to the idea of sustainability in today’s world.

1. Can the energy source you chose to research be used as a sustainable resource to create energy for the world today? Explain.
2. Bonus: Give real world evidence if possible.

**Rubric:**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | **1** | **2** | **3** | **4** |
| Collaborative work | My group did not work well together and we did not finish on time | My group worked pretty well together and we mostly finished | My group worked well together and we finished on time | My group worked effectively, finished on time, and all roles were accomplished |
| Factual information | No facts were included in the google slides | 1-2 facts were included in the google slides | 3-4 facts were included in the google slides | 5 or more facts were included in the google slides |
| Benefits | Only 1 benefit is listed accurately | At least 2 benefits are listed accurately | At least 3 benefits are listed accurately | 4 or more benefits are listed accurately |
| Negative | Only 1 negative impact is listed accurately | At least 2 negative impacts are listed accurately | At least 3 negative impacts are listed accurately | 4 or more negative impacts are listed accurately |

**Period 3: Power point Presentations and note taking**

**Objective:**

SWBAT present their specific power point presentations to the class

SWBAT take 3 notes about each of their peer’s specific presentation

SWBAT complete a quiz using their notes based on the different types of renewable and non-renewable energy sources.